DOCUMENT RESUME

ED 156 312 PS 009 881

AUTHOR Lacoste, Ronald J.
TITLE Young Children's Ability to Match Facial Features Typical of Race.
PUB DATE [73]
NOTE 19p.

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Blacks; *Caucasian Race; *Childhood Attitudes; Middle Class; *Physical Characteristics; *Preschool Children; Racial Attitudes; Racial Characteristics; *Racial Recognition; Research

ABSTRACT

This study examined (1) the ability of 3- and 4-year-old children to racially classify Negro and Caucasian facial features in the absence of skin color as a racial cue; and (2) the relative value attached to the facial features of Negro and Caucasian races. Subjects were 21 middle income, Caucasian children from a privately owned nursery school in Austin, Texas. Children participated individually in a puzzle game in which they were presented with puzzle pieces for a Caucasian and a Negro face. There were four uniformly cut pieces for each face (hair, eyes, nose, mouth), so that a facially conglomerate face could be constructed. Subjects were asked to make two different faces. Placement of puzzle parts was recorded on a score sheet. When the two faces were completed, subjects were asked which version of each feature they liked best. They were then asked to indicate the "Negro or black face", after which they were asked to use any of the pieces to construct the face of a friend they would like to play with. Children demonstrated clear awareness of race and some preference for the facial features of the Caucasian race. Especially significant was the amount of awareness of and preference for the hair of the Caucasian face puzzle. (SB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED156312

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

SCOPE OF INTEREST NOTICE

The ERIC Facility has assigned this document for processing to: TM | PS

In our judgement, this document is also of interest to the clearinghouses noted to the right. Indexing should reflect their special points of view.

YOUNG CHILDREN'S ABILITY TO MATCH FACIAL FEATURES TYPICAL OF RACE

Ronald J. Lacoste
University of Texas at San Antonio

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Ronald J. Lacoste

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

PS009881

Abstract

On a puzzle task designed to determine their awareness of and preference for the facial features of different races, three and four year old children demonstrated clear awareness of race and some preference for the facial features of the Caucasian race. Especially significant was the amount of awareness of and preference for the hair of the Caucasian face puzzle. Additional research is needed to elucidate and clarify the results of this experimental and speculative study.

Young Children's Ability to Match Facial Features Typical of Race

As long as there is racial prejudice there will be reason to study racial prejudice. That this form of injustice exists today in our society and in other societies throughout the world is evident. Not so apparent are the diverse etiological factors that promote racial attitudes. These attitudes are learned at an early age. Thus it is fitting to examine the young child's awareness of racial identity to learn more about the formation of racial attitudes.

This study is designed to examine the ability of three and four year old children to classify facial characteristics according to the racial aspects of those features in the absence of skin color as a racial cue.

A secondary consideration of this study is to attempt to determine the relative value attached by the children in the sample to the facial features of two different races.

It is crucial in attempting to learn more about the nature of racial prejudice to investigate how children learn racial cues and what specific racial cues are significant for young children. Several studies have demonstrated the significance of skin color as a racial cue for young children (Ammons, 1950; Durrett & Davy, 1970;

Katz, 1973; Stevenson & Stewart, 1958). However no studies have examined the effects of facial characteristics as racial cues in the absence of skin color. This study endeavors to add knowledge to the study of racial prejudice by examining facial characteristics as racial cues.

Review of Literature

In a study of the developmental aspects of racial awareness, Stevenson and Stewart (1958) tested three to seven year old children for their ability to discriminate the physical differences between Negroes and Caucasians and for their racial preferences and attitudes. Results indicated that the ability to discriminate physical differences develops rapidly during the preschool years. While the three year olds in the sample had difficulty making proper discriminations, seven year olds could discriminate between the races with ease.

Renninger and Williams (1966) used a series of picture cards to determine young children's awareness of color connotations and a picture puzzle to determine their racial awareness. The four and five year old children in their sample were shown to be both aware of race and congnisant of color connotations. A significant effect on the test for racial awareness was not obtained with the three year olds

in the sample although they showed a strong preference for same-race (Caucasian) playmates.

In another study, Durrett & Davy (1970), used Negro and Anglo dolls to test the racial awareness and attitudes of Mexican-American, Negro and Anglo children three and four years old. Most of the subjects in the study were able to classify correctly and did so primarily on the basis of skin color. In comparing the results of this study with those of Stevenson and Stewart it is interesting to note that children seem to have become more racially aware with the passage of time.

Katz (1973) investigated the ability of children three to five years of age to learn to discriminate the faces of another race. Schematic faces of three color shades (green, brown, and pink-flesh) were presented to children in pairs. Results indicated that children had more difficulty learning to discriminate faces of their own race. The author interpreted this as possibly being due to the effect of racial labels on the perceptual similarity of faces of another race.

In the above studies skin color was used as the primary racial identifier. Ammons (1950) added the dimension of facial features as racial cues. Sixty percent of Ammon's

sample of two to five year olds (N=60) were able to discriminate skin color and facial differences among the dolls used in the study. However in his conclusions he emphasized the effect of skin color and did not mention facial characteristics. This may have been due to the inseparable nature of skin color and facial characterisitcs in his doll play design.

Few studies have been reported on young children's ability to discriminate facial features. In one (Bodalev, Kunitsyna, Maksimova, Panferov, Pikel'nikova, Stepkin & Fedotova, 1972), Panferov attempted to determine the relative significance of the different elementary facial features to preschooler's, school children and college students. His findings indicated that the greatest probability for correct identification of these features, using a tachistoscope technique, rested with: hair style (0.165), hair (0.103), shape of face (0.116), eyes (0.082), facial expression (0.059)*. Unfortunately in reporting the results of this study, the data were not analyzed by age group rendering it impossible to assess the performance of the preschooler's in the sample.

---

*The figures in parentheses indicate the probability with which subjects singled out this feature (range 0-1)

Karen Dion (1973) conducted an investigation to assess the extent of stereotyping based on facial attractiveness among children three to six and one-half years of age. Results of her study indicated that even the youngest children in her sample were able to discriminate differences in facial attractiveness. These findings seem to contradict those of another study (Cavior & Lombardi, 1973) in which the three, four and five year olds in the sample were not found to be reliable in assessing facial attractiveness.

Thus the hypothesis of this study that children shall not label completed face puzzles according to race in the absence of skin color as a racial cue and that children shall not demonstrate preferences for facial characteristics of either the Negro or Caucasian race, find only tenous support in the literature.

Method

Subjects: Thirty-four children were chosen from a privately owned nursery school in Austin, Texas. All children between the ages of three years, zero months and four years, eleven months who were present on the two consecutive days of testing served as subjects. The mean age of this group was three years, seven months. The subjects were from predominately middle income families and mostly Caucasian.

Procedure: Three face puzzles were constructed for the study, one of an Oriental, one of a Negro, and one of a Caucasian face. The faces were first drawn in graphite pencil on heavy, cream colored paper, then laminated in clear plastic. To form puzzles the faces were then cut laterally rendering four puzzle pieces, hair, eyes, nose, and mouth. These pieces were cut uniformly so that a face could be constructed using any of the pieces even if the result was a racially conglomerate face. The faces were expressionless, of indeterminate sex and judged by the artist and the examiner to be uniformly attractive. To reduce the need for shading that might betray skin color the features were large and somewhat stylized.

The first eight children were tested in their classroom. This proved to be an unsatisfactory arrangement so the remainder of the children were tested in a quiet corner of the office-lobby of the school. There the examiner and the subject were seated on a comfortable red carpet away from loud distractions and interference from other children. Each of the children tested in the office-lobby was led to the testing area and introduced to the examiner by their own teacher. The examiner then asked the subject to join him on the

carpet and after a few minutes establishing rapport the test was begun.

The Oriental face puzzle was used in a pretest to determine the subject's ability to construct a face and to properly label its component parts. The four pieces were laid face up before the subject in a predetermined constant arrangement. The examiner then told the child that the pieces would make a face and asked the child to "put them together to make a face." As the subjects constructed the face the examiner recorded on a score sheet the configuration of the pieces. When the subject had finished the examiner pointed to each piece beginning with the hair and asked the subject "what is this part called?"

Subjects who could not successfully complete a face (three facial features minimum) or properly label at least three facial features were thanked and dismissed. Subjects successful on the pretest were praised and aksed if they would like to play another puzzle game. As the puzzle parts of the Negro and Caucasian faces were being laid out in their constant, predetermined order the subject was told "here are some more puzzle parts, see if you can make two different faces." Again the exact placement of the puzzle parts was recorded on

a score sheet. When the two faces were completed the subject was praised and then asked, "which hair do you like best, which is the prettiest hair?" and then "Why?" this line of questioning was followed for each of the facial features in turn. Responses to this segment of the test were recorded both on a score sheet constructed for this purpose and on an electronic tape recorder. At this point the child was complimented on his performance and asked to indicate "the Negro or black face." These responses were also recorded both on the score sheet and on tape. After this the subject was asked to use any of the pieces now before him (Negro and Caucasian) to construct the face of a friend he would really like to play with. The subject was then thanked and dismissed.

Results: Of the 34 children tested 21 completed the pre-test (Oriental face) to criterion. Eight of the 20 mis-placed or mis-labeled the nose, with six subjects placing the nose under the mouth calling it the neck. One subject placed the nose under the mouth and called it the legs, another placed the nose in a vertical position juxtaposed to the left side of the face and called it an ear. The remaining 14 subjects completed the face and labeled the parts correctly. All of the 21 subjects tested in the major section of the test were able to complete the puzzles

sufficiently well as to be able to answer the questions included in the test.

In answering the question regarding the prettiest or best hair, 18 of the subjects in the sample indicated the Caucasian hair, three the Negro hair. Using a chi square test, this difference was found to be significantly larger (p. .01) than would be expected by chance occurrence alone. Subjects showed slight numerical preference for the Caucasian eyes, nose and mouth but these differences were not statistically significant.

Insert Table I Here

Eighteen of the 21 subjects were able to identify the black face using hair as the significant cue. A Chi square test showed this frequency to be significant at a high level of confidence (p. .01). When asked to construct the face of a friend only six of the subjects used the Negro hair as part of their puzzle. This frequency was found to be significant at a five percent level of confidence. Thirteen of the subjects used one or less Negro feature in the construction of the friend's face. Five subjects used one or less Negro feature in the construction of the friend's face. Five subjects used one or less Caucasian feature in the same task and three subjects used half Caucasian and

half Negro features. These preference frequencies were subjected to a chi square test and found to be significantly different at the 2% level of confidence.

Insert Table 2 Here

Results of this study are consistent with the results of several previous studies (Ammons, 1950; Durrett & Davy, 1970; Renninger & Williams, 1966; Stevenson & Steward, 1958) in demonstrating young children's ability to recognize racial types. However to knowledge of the author this study offers the first empirical evidence that children can continue to make this discrimination in the absence of skin color as a racial cue. The significant number of subjects who correctly labeled as black the puzzle with the Negro hair enabled the rejection of the first null hypothesis. However subjects did not appear to use any other facial feature as a racial cue. Perhaps this was due to the stylized nature of the instrument. Further research is needed to determine young children's ability to discriminate facial features using photographs or other equally realistic modes of presentation. That the subjects did attend to very fine differences among the facial features is demonstrated by their comments during the testing. One

boy in answer to a query about his reason for choosing the Negro lips replied "look down there" (pointing to the full curve of the Negro underlip) "that's why I like it better." Another boy, in defense of his preference for the Caucasian lips stated that they were better because they didn't have "two little bumps" again referring to the full curve of the Negro underlip.

In demonstrating their awareness of the fine differences between the two types of eyes, subjects made such comments as "because they got everything on it" referring to the more elaborate lashes of the Negro eyes, a boy choosing Caucasian eyes "because they are boy's eyes," another boy "because they have the same kind as we do" again referring to the elaborated, curly lashes of the Negro eyes.

Subjects demonstrated clear preferences and attitudes in commenting on the hair of the puzzles. One liked the Caucasian hair "because its not curly like the other one." Another, a young girl, preferred the Negro hair "because it curls." Several children made comments about the style of the hair such as liking the Caucasian hair because it fell down over the forehead or was "long in front." Three subjects referred to the Negro hair as being black even

though both the Negro and Caucasian hair were drawn in pencil.

There were only two comments recorded about the noses of the puzzles. One child picked the Caucasian nose because it was "the same shape as mine." Another didn't like the Negro nose because of the two dark spots indicating the flare of the nostrils.

Thus it seems that even though children of this age do not seem to overtly associate facial features other than hair with race they do pay a great deal of attention to the details of the facial features. This assumption is supported by the results obtained on the section of the test involving the construction of the face of a friend. Here subject's preferences for Caucasian features were significantly higher than their preferences for Negro features. So even though the subjects did not appear to associate the features directly with race they did demonstrate clear preferences for certain facial features.

In examining the second null hypothesis it is only in case of hair that there is sufficient evidence to enable rejection of the null hypothesis with any degree of confidence. It is interesting to note the very low levels of confidence obtained on the other facial features (see Table 1). The levels of confidence obtained with the eyes, nose, and mouth do not indicate a trend toward a

preference for the features of either race. This is especially surprising considering the low use of Negro features in the construction of the face of a friend. Perhaps this is due to the artistic rendition or to some unknown developmental factors. Before a firm conclusion can be drawn regarding children's recognition of and preference for the facial features of any race further research needs to be undertaken to refine the methodology of this study and to assess its reliability and vailidity with a larger sample of children.

Table 1

Frequence of Preference
For
Different Facial Features

Race of Features	Type of Feature			
	Hair N=21	Eyes N=21	Nose N=20	Mouth N=21
Caucasian	18	14	11	12
Negro	3	7	9	9
Expected Frequency	10.5	10.5	.2	.428
	P .01	p .20	p .70	p .70

Table 2

Frequence of Use of
Puzzle Parts by Race

Frequency	Name and Race of Face Parts Used		
	One or less Negro part	One or less Cauc. part	Half Negro Half Cauc.
Observed Frequency	13	5	3
Expected Frequency	7	7	7

Chi Square 7.99 p .02
df=2

References

Ammons, R.B. Reactions in a projective doll-play interview of white males two to six years of age to differences in skin color and facial features. The Journal of Genetic Psychology, 1950, 76, 323-341.

Bodalev, AA., Xunitsyna, R.A., Maksimova, R.A., Panferov, N.N., Pikel'nikova, M.P., Stepkin, Y.P. & Fedotova, N.F. New data on problems of social perception. Soviet Psychology, 1972, 9 (1), 85-95.

Durrett, M.E., and Davy, A.J. Racial awareness in young Mexican-American and Anglo children. Young Children, 1970, 26, 16-24.

Cavior, N. & Lombardi, D.A. Developmental aspects of judgement of physical attractiveness in children. Developmental Psychology, 1973, 2 (1), 67-71.

Dion, K.K. Young children's stereotyping of facial attractiveness. Developmental Psychology, 1973, 9 (2), 183-188.

Renninger, C.A. & Williams, J.E. Black-white color connotations in preschool children. Perceptual and Motor Skills. 1966, 22, 771-785.

Katz, P.K. Perception of racial cues in preschool children. Developmental Psychology, 1973, 8 (2), 295-299.

Stevenson, H.W., & Stewart, E.C. A developmental study of racial awareness in young children. Child Development, 1958, 29 (3), 399-409.